

ABSTRACT OF THE DISCLOSURE

An MI sensor is miniaturized while maintaining high sensitivity. At least one MI element detects an external magnetic field and outputs a sense signal. The sense signal is supplied to a rectangular IC chip. The IC chip is provided with an MI element connection electrode connected to the MI element and a switching circuit controlled by a pulse signal so as to supply a pulsed magnetizing current to the MI element through the MI element connection electrode. The MI element connection electrode is located near a side of the rectangular IC chip.